

PX30

February 2018

The Telegram Open Network Investment Thesis

Executive Summary

Not since the advent of the internet, has a new innovation posed such opportunity for value and utility creation as blockchain technology and its associated cryptoassets. However, as opportunistic as this nascent space is, it has also proven to be inherently risky. Teams with opaque backgrounds and undifferentiated technologies are raising funds (arguably, well beyond fundamental value) across the landscape. It is in this context that Telegram offers a breath of fresh air. While investors will have no shortage of digital asset projects to consider in 2018, there is only one which boasts a pre-existing network valued in the billions, and a team who has already built successful applications for hundreds of millions of users.

Telegram is a non-profit messaging service founded in 2013 by brothers Pavel and Nikolai Durov, the same team that built VK, the Russian Social Network which serves over 400 million users. In its 132-page White Paper, Telegram has outlined its plans to launch the Telegram Open Network (TON), a multifaceted blockchain protocol that will offer an encrypted value and data transfer platform for both Telegram users and the wider open source community.

The TON blockchain's underlying cryptocurrency will be known as 'Grams'. To fund its ambitious project Telegram is planning to offer 66% of its initial supply of Grams to raise up to USD \$1.2B. We are confident in long-term value creation from TON for three key reasons:

- Telegram is projected to reach 200 million users in Q1 2018. We cannot underestimate the potential value of existing network effects in deploying new technologies.
- The TON blockchain has the potential to capture sizeable market share of the rapidly growing digital payments space.
- The project has a proven team who has worked together for over a decade successfully scaling technologies to hundreds of millions of users.

If TON is able to capture at least the full value of Telegram's existing user base, we see TON valued at a market capitalization of over \$30B in 2021, giving an annualized return of 180% to early investors.

An Introduction to Telegram

Product:

Telegram is a cloud-based mobile and desktop messaging application grounded in libertarian ideals. While similar to platforms like WhatsApp and Facebook Messenger, Telegram is differentiated in its status as a non-profit and its emphasis on security. Telegram's heavy focus on encryption, security and user privacy have been integral in its success to date.

Telegram has thus far been self-funded by one of its founders, Pavel Durov. Pavel and his brother Nikolai Durov initially built VK, the highly successful Russian social network, before they were seemingly forced out of both company and country over data privacy clashes with the Russian authorities.

Since its launch in 2013, Telegram has surged in popularity with projections of 200 million active users worldwide in Q1 2018 on a 50% annual growth rate (according to Durov). Although Telegram is allegedly popular among criminals and extremists,¹ the scale of this user base offers a captive audience that no other Initial Coin Offering (ICO) can boast.

Team:

In the context of this offering, it is crucial to not just examine Telegram as a product, but also, Telegram as a team. The development team behind Telegram, were also largely responsible for building VK, with core team members having over 10 years' experience working under the Durov brothers. Telegram prides itself on its world class developers exhibiting an unparalleled ratio of winning worldwide coding competitions.² However, while this is undoubtedly impressive, we see the team's years of experience as their most valuable attribute. In such an emergent and revolutionary space, the skills and synergies of a team that has built scalable products for tens of millions of users over an extended time period is invaluable.

The TON Offering:

Description:

The TON (Telegram Open Network) blockchain aims to be a multifaceted system: an integrated value transfer platform for the decentralized economy. In addition to the TON blockchain core, the TON infrastructure will offer many components consisting of a payments system that aims to rival the likes of Visa and MasterCard, storage capabilities, privacy measures and content viewing and browsing services. These components will play a supportive role for the blockchain whilst having useful functionality independently. Combined, they allow the network to host more versatile applications than the TON blockchain in isolation. Additionally, TON will develop their own "light wallet" for mobile devices that will be incorporated into Telegram applications.

The Offering:

TON tokens will be called Grams. These will be dispersed to the public through two stages: the first to institutions and high net worth investors through February 2018, while the second stage will be sold

¹ Source: Newsweek: What is Telegram? The app Isis uses, Russians love and Governments hate. Damien Sharkov, 27 June 2017. <http://www.newsweek.com/what-telegram-app-isis-uses-russians-love-and-governments-hate-629326>

² Telegram Pre-Sale Primer

directly to the public starting in late March 2018. The first token of the first stage will be sold for USD \$0.10, with each subsequent token selling for a slightly higher price, dictated by the formula below, where n is the number of Grams in circulation:³

$$\text{Gram price} = 0.1 \cdot (1 + 10^{-9})^n \text{ USD}$$

In total, there will be an initial supply of 5 billion Grams. Possible allotments are below as outlined in the Pre-Sale Primer, however we expect the latter chart to be the outcome as the TON sale is reportedly already oversubscribed.

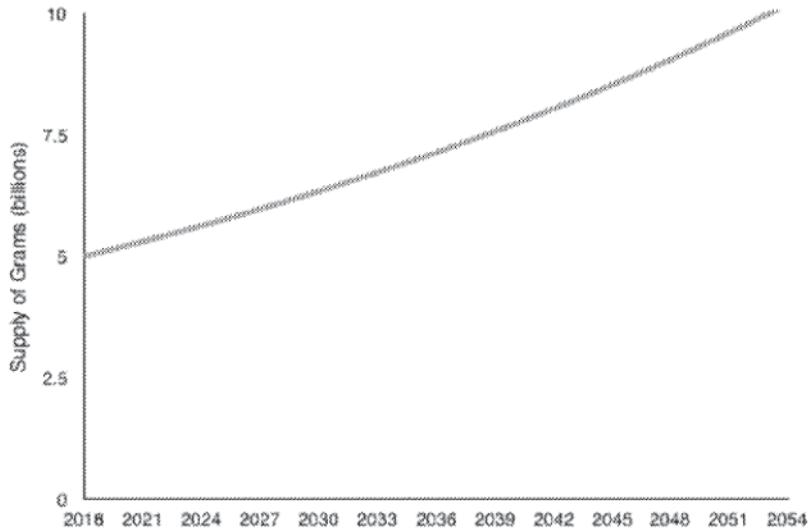
Figure 1: Possible Gram Allocations⁴



Grams will not be delivered to participants until full deployment of the TON blockchain, expected to take place in Q4 2018. Subsequently, Grams will list on exchanges and become publicly traded in Q1 2019. However, Grams sold in the first stage will be subjected to lock up provisions, released in four equal tranches after deployment (18-months to receive full allocation).

The TON blockchain will use a proof of stake consensus mechanism whereby holders of Grams act as validators for transactions: the more Grams one holds, the more one is rewarded for validating transactions. Following full deployment, an inflation rate of 2% will be set where new Grams generated are paid to validators as a fee for maintaining the network.⁵

Figure 2: Telegram Supply Schedule



³ Telegram Technical White Paper

⁴ Telegram Primer

⁵ Telegram Primer

Essentially, this dispersion of new Grams to transaction validators means that investors may receive additional Grams as interest on top of their initial investment. Investors should assess their custodial solution to understand whether they will be receiving validation payments from the TON blockchain.

Ton Reserve

A minimum of 20% of TON's initial supply will be held by the TON Reserve- a central bank of sorts.⁶ In the TON White Paper, Telegram has outlined the ability for the TON Reserve to buy and sell tokens in order to stabilize the market price of Grams so that the price "*may be less prone to sudden spikes (and drops).*"⁷ We expect the TON Reserve to be very active in exerting its influence on price; decreased Gram volatility is advantageous in that the blockchain is more usable (transaction fees are more consistent) and users feel more comfortable transacting in Grams (consistent store of value).

We see huge potential for the adoption of Grams by Telegram users if the TON Reserve is successful in minimizing price volatility. To date, fluctuating cryptocurrency prices have hindered their use for general payments. Why pay someone in bitcoin if the price could theoretically be 10% higher once the transaction has finished processing? We hold a bullish view that if Telegram's price stabilizing efforts are implemented successfully, we could see the TON blockchain adopted by the mainstream for digital payments, a market set to reach 726 billion transactions by 2020.⁸

Governance

Telegram has stated that the Telegram Open Network will eventually be renamed 'The Open Network'. This would seemingly reflect the teams ambition that TON does not only occupy a network within the Telegram ecosystem, but rather more grandly, the global open source community. To add to this transition, Telegram has also outlined that all responsibilities related to TON and the TON reserve will eventually be transferred to the 'TON Foundation' a not for profit organization. This transition is expected to be completed by 2021. Whatever the case, whether the above transitional changes eventuate or not, we firmly believe that the Durov brothers, and in particular Pavel will be the guiding force behind TON.

Historically, in matters of user protection and privacy, the Durov's have acted with integrity. Durov was forced into an unceremonious exit from VK amidst speculation of government intervention when he refused to release personal information of select VK users requested by the Russian state.⁹ Additionally, the Durov's do not appear to be financially motivated. Telegram has been personally funded by Pavel Durov through his Digital Fortress fund. Furthermore, Telegram is not for sale. Durov stated that he'll continue to dismiss buy-in offers from Silicon Valley investors. "*Even for \$20 billion, it's not for sale ... that's a lifetime guarantee.*"¹⁰ Rather, what seems to drive them is their libertarian ideals and their technological reputations. Those driving factors would seem to result in a genuine motivation to make TON and its underlying cryptocurrency an encrypted network with fundamental utility and value.

In more traditional asset classes, it has been noted that good governance can result in better performance and long-term value creation. We believe that the governance of the TON blockchain- the TON Reserve coupled with guiding force of the Durov brothers, are ideally placed to ensure that Grams have a stable infrastructure for long-term performance.

⁶ Telegram Pre-Sale Primer

⁷ Telegram White Paper

⁸ Source: World Payments Report 2017. <https://www.capgemini.com/service/world-payments-report-2017-from-capgemini-and-bnp-paribas/>

⁹ Source: The Moscow Times. Vkontakte founder Pavel Durov learns he's been fired through media. April 22, 2014.

<https://themoscowtimes.com/articles/vkontakte-founder-pavel-durov-learns-hes-been-fired-through-media-34425>

¹⁰ Source: Bloomberg. Tis \$5 billion encrypted app founder isn't for sale at any price. Stepan Kravchenko, Nour Al Ali & Ilya Khrennikov, December 17, 2017. <https://www.bloomberg.com/news/articles/2017-12-12/cryptic-russian-crusader-says-his-5-billion-app-can-t-be-bought>

The Investment Opportunity for TON

We have identified two possible drivers of alpha for the TON blockchain and Grams. The first, network effect potential, addresses the make-up of Telegram's current and growing user base, and the unique existing features that Telegram offers as a messenger platform, which we see as providing a natural lead-in to the TON blockchain. The second investment opportunity addresses the potential for major adoption of payments in the mobile space.

Network Effect Potential:

Telegram is incredibly unique in the ICO project world in that it is an already well established messaging platform used around the globe. Metcalfe's Law, which identifies that the value of a network is proportional to the square of the number of its users, has been an effective predictor of price movement in Bitcoin and Ethereum.¹¹ The fact that TON will be leveraging Telegram's pre-established and rapidly growing market of more than 170 million active users, many of which are cryptocurrency literate, indicates strong pre-existing network effects and corresponding immediate value potential.

Telegram's User Base

Strong pre-existing crypto community

Telegram is the de-facto medium of choice for cryptocurrency communities where more than 78% of current and upcoming blockchain based projects have active Telegram communities, significantly more than all other chat applications combined.¹² The assumption that every single Telegram user is interested in cryptocurrency may be overzealous, but we can be confident that there is an existing healthy user base that is interested in cryptocurrencies and this number is poised to grow as the ICO and cryptocurrency space continues to expand.

Rapidly growing and authentic user base

Regardless of users who are interested in cryptocurrency, Telegram boasts a rapidly growing user base. Adding new users makes a network more valuable for all participants as it increases the probability that everyone will be able to draw meaningful utility from the network.

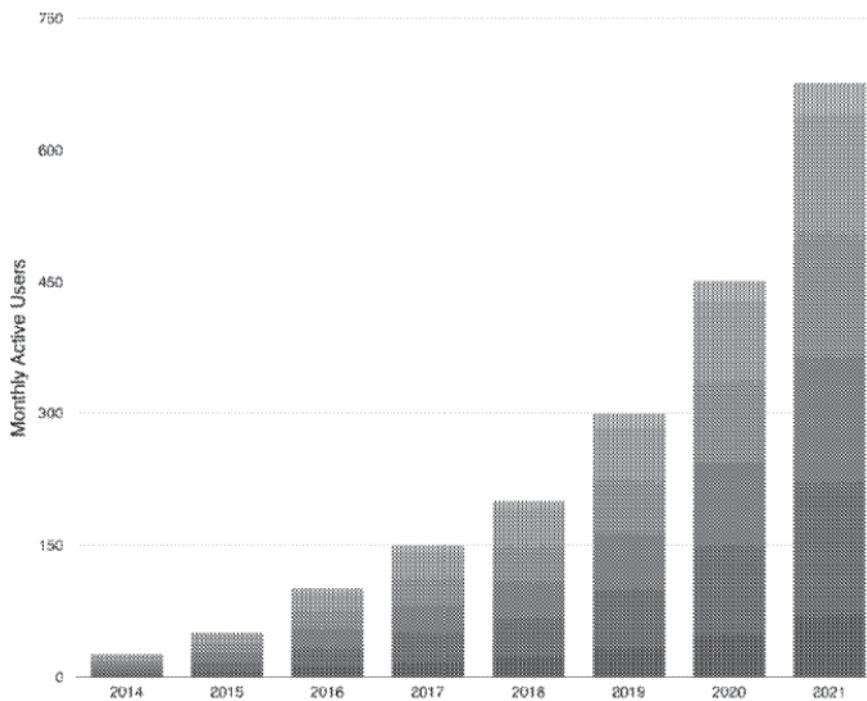
Telegram has typically lacked any type of marketing strategy. Through its early history, Telegram has spent zero dollars on advertising, relying solely on word of mouth for marketing.¹³ By the start of 2016, the marketing budget remained at zero with over 100 million active users and around 350,000 new users signing up daily.¹⁴ In 2018, Telegram is projected to hit 200 million monthly active users in Q1, with 500,000 joining daily.

¹¹ Source: ScienceDirect. Digital Blockchain Networks appear to be following Metcalfe's Law. Ken Alabi. Electronic Commerce Research and Applications. Vol. 24, Jul-Aug 2017. Pages 23-29.

¹² Telegram Pre-Sale Primer

¹³ Telegram Blog: Telegram reaches 1 billion daily messages. The Telegram Team, December 8, 2014. <https://telegram.org/blog/billion>

¹⁴ Source: East West Digital News. Messaging app Telegram passes 100 million active users with zero marketing budget. February 24 2016. <http://www.ewdn.com/2016/02/24/messaging-app-telegram-passes-100-million-monthly-active-users-with-zero-marketing-budget/>

Figure 3: Telegram Monthly Active Users, historical and forecast¹⁵

We see this growth in user base without any marketing expenditure as a positive nod to the integrity of the network and the lack of illegitimate accounts (such as double accounts, fake accounts). Unlike other social networks such as Twitter or Snapchat, Telegram does not report to investors and thus has no incentive to add or engage users for the sake of an earnings call.

Because Telegram's community has been built through steady organic growth, it is a network with strong connectivity and intent relative to other social networks and messaging applications. This cannot be undervalued. The value accumulated in a network is not just proportional to the number of participants; the individual contribution of each participant, and the value of engagement between those participants, matters.¹⁶ As such, the organic growth of Telegram is imperative in maximizing network effects; the more users added to the network and the greater the contribution of those users, the greater the potential value of the network itself.

Demographic diversity

Telegram is also penetrating markets globally. It has established itself in the Top 10 communications usage rank category in the U.S., Canada, Germany and the U.K. It is notorious for being used in countries that enforce internet restrictions like Iran and Malaysia but also has a strong presence in the United States where it is more popular than apps like Pinterest and Tumblr on the Google Play store.¹⁷ With recent regulatory crackdowns on cryptocurrencies in China, many WeChat users are defecting to Telegram because as a foreign encrypted platform, it does not fall directly under the Chinese government's jurisdiction.¹⁸

¹⁵ Source: Fx-rating. <https://fx-rating.com/overviews/9750/>

¹⁶ Source: a16z Blog: Two Powerful Mental Models: Network Effects and Critical Mass. Tren Griffin, March 7, 2016. <https://a16z.com/2016/03/07/network-effects-critical-mass/>

¹⁷ Source: SimilarWeb. <https://www.similarweb.com/app/google-play/org.telegram.messenger/statistics>

¹⁸ Source: Bloomberg. China's WeChat crackdown drives bitcoin devotees to Telegram. Lulu Yilun Chen, September 15, 2017. <https://www.bloomberg.com/news/articles/2017-09-15/china-s-wechat-crackdown-drives-bitcoin-devotees-to-telegram>

Not only does Telegram's growing success across a myriad of diverse markets insulate it from geopolitical and regulatory risk, but it will also offer the TON blockchain immediate access to a global audience. We firmly hold the view that Telegram's diverse user base enhances the potential for the TON blockchain to be meaningfully adopted as it offers it the chance to provide utility across a range of different audiences.

Proven user experience:

The Telegram team has already delivered on a well-designed user experience with VK, which has become the largest social networking site in Europe, and their current product, the Telegram platform. Because practical use of cryptocurrencies is still operationally difficult for an average user, we see Telegram's UX and "ease-of-use" element as a critical differentiator. The integration of cryptocurrency payments into a platform like Telegram, with a pre-established crypto-literate user base and a user-friendly interface, will spur user adoption and growth, not only within the Telegram network and TON blockchain, but across the wider blockchain and cryptoasset space.

Unique Telegram Features

The current Telegram product boasts many features that offers functionality and purpose to its users. Telegram's focus on both Bots and encryption are innovative features in the mobile messenger space. We believe that these unique differentiators have certain characteristics that will be a complementary match for the blockchain sphere.

Bots API

In June 2015, Telegram launched their Bots API, allowing the developer community to build custom services inside the app, integrating with external platforms, offering chat support for services or do any variety of things.¹⁹ The Bots API was successfully received by the community, with Telegram reporting a 1200% increase in messaging activity through 2015,²⁰ which can largely be attributed to the use of the Bots API. There has been a variety of uses propelled by the Bots API, from developers releasing weather bots to media outlets creating news bots.

We hold a bullish view on Telegram's openness to the developer community to build applications in their ecosystem and the resulting impact on the value of the TON network. The Bots API will give creative and entrepreneurial opportunity to the open source community to utilize Grams as a means of transferring or storing value or data. As Bots have existing proven utility and value in allowing users and businesses to systemize their core processes within Telegram, the unison of Bots and the TON blockchain offers value-add utility for user and business applications within TON. For example, an e-commerce site could release a Bot selling inventory to Telegram users with Grams being the method of payment.

Encryption

Telegram's double-layered encryption has helped lead to its immense popularity as a messaging application. Server-client encryption is used in cloud chats, while the Secret Chats use an additional client-client layer. The Telegram team is so confident in their security that they offered a \$300,000 reward for anyone who could successfully break Telegram's encryption protocol.²¹ The contest was open for 3 months and no-one was able to successfully complete the challenge.²²

¹⁹ Telegram Blog: Telegram Bot Platform. The Telegram Team, Juen 24, 2015. <https://telegram.org/blog/bot-revolution>

²⁰ Medium: 10 of the most useful bots for Telegram. Natalie Korotaeva, May 13, 2016. <https://medium.com/chat-bots-developers/10-of-the-most-useful-bots-for-telegram-e6cd67ba48a>

²¹ Telegram Blog: \$300,000 for cracking Telegram encryption. The Telegram Team, November 4, 2014. <https://telegram.org/blog/cryptocontest1>

²² Telegram Blog: Crypto contest ends. The Telegram Team, February 11, 2015. <https://telegram.org/blog/cryptocontest1-ends>

As privacy becomes increasingly important to the modern user (70% of millennials believe that no one should be able to access their personal data or web behavior),²³ we believe that ultra-secure encryption and teams that open themselves to such scrutiny, creates the opportunity to capture significant market share. Given Telegrams (and likely TON's), openness and ease of use, we do not think it improbable that the mainstream will gravitate to its network for frictionless and secure transfer and storage of both data and value.

Potential for Mobile Payments

Shifting Sentiment from Social Media to Messenger Platforms

We are seeing a global migration from social media platforms to messenger platforms.²⁴ Falling data prices, cheaper devices and improved features are helping to propel the growth of mobile devices. Messaging apps are poised in the market to become about more than just messaging.

The 2017 World Payments Report, conducted by Capgemini and BNP Paribas, found that E-payments and M-payments are forecast to grow at a CAGR of 17.6% and 21.8% from 2015-2019E respectively. E-payments are projected to lose market share to M-payments: the year-on-year growth rate of E-payments is expected to decrease from 19.2% in 2016 to 15.3% in 2019. This is largely due to the growing acceptance of M-payments and a shift of transaction volumes from E-payments to M-payments with the proliferation of mobile devices.²⁵

The first stage of the messenger app revolution was focused on growth. In the next phase, companies will focus on building out services and monetizing user bases. We believe that Telegram has been executing the growth stage, establishing a core, developing user base. With the TON blockchain, they continue to make an opportunistic move towards building out infrastructure and monetizing their network in the digital payments space.

Potential for Messenger Payments Adoption in the West

It is no secret that there has been exploding growth of mobile payments in China. Spearheaded by Alipay and WeChat Pay, forecasts predict that mobile payments volume could exceed credit card volume in 2018.²⁶ We believe that a similar trend hasn't yet emerged in Western society because we are yet to see a product offering a 'better than the status quo' user experience. By combining the efficiencies of an engaged network with an operationally easy-to-use application, Telegram and TON blockchain may be the most well-positioned to make the breakthrough in this market (competition is probably the likes of Facebook/WhatsApp).

This is not a trivial market opportunity; digital payments are projected to grow 10.9% on average through 2020 and are on track to hit 726 billion transactions by 2020.²⁷ Recent research by Global Web Index would suggest that Telegram's user base will quickly adopt a user-friendly payment application.

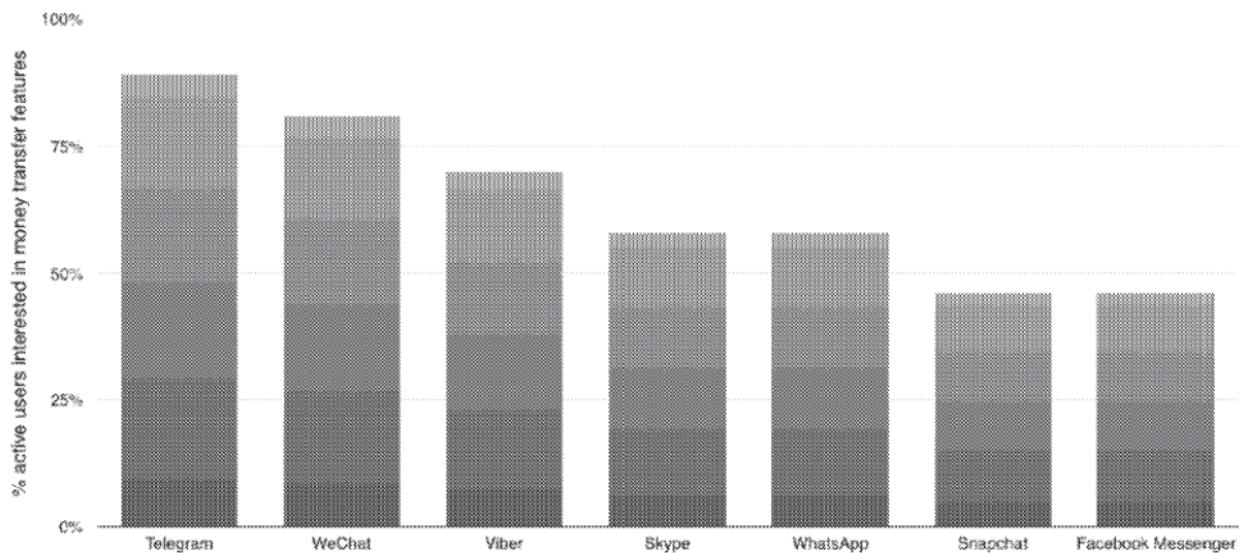
²³ Source: ACLU: Do young people care about privacy? Jay Stanley, April 29, 2013. <https://www.aclu.org/blog/privacy-technology/do-young-people-care-about-privacy>

²⁴ Source: Business Insider: The Messaging App Report. Will McKitterick, November, 2015.

²⁵ Source: World Payments Report 2017. <https://www.capgemini.com/service/world-payments-report-2017-from-capgemini-and-bnp-paribas/>

²⁶ Source: Next Big Future: China's mobile payments volume could exceed global credit card volume in 2018. Brian Wang, January 17, 2018. <https://www.nextbigfuture.com/2018/01/chinas-mobile-payments-volume-could-exceed-global-credit-card-volume-in-2018.html>

²⁷ Source: World Payments Report 2017. <https://www.capgemini.com/service/world-payments-report-2017-from-capgemini-and-bnp-paribas/>

*Figure 4: Percentage of active users wanting to transfer money on messaging applications*²⁸

It is incredibly exciting and promising that such a large percentage of Telegram's current network would like the optionality of money transfer integration. As a new payments ecosystem is emerging, with momentum in the direction of mobile payments, we see this as a hugely bullish indicator for the mainstream adoption of TON and the use of Grams for digital payments.

TON Valuation

Revenue Capture with TON Blockchain

Currently, Telegram is free to use and has no way to monetize. They pride themselves on offering free, fast messaging services and currently operate as a non-profit. The introduction of TON blockchain architecture and its native token, Grams, allows Telegram to capture the value of the sweeping network they are building. Currently Telegram operates in a Wikipedia-like fashion where they have created extensive value for their users but have no way to capture this value, relying solely on donations. The introduction of Grams allows the value of the Telegram network to be captured.

A Valuation Experiment

By examining the potential future value of the Telegram network, we can set forecasts for the future price of a Gram given the assumption that the TON blockchain will capture at least some portion of the value of the Telegram network itself. In Q1 2018, Telegram will serve 200 million monthly active users with about a 50% annual growth rate, on pace to reach 675 million users by 2021.

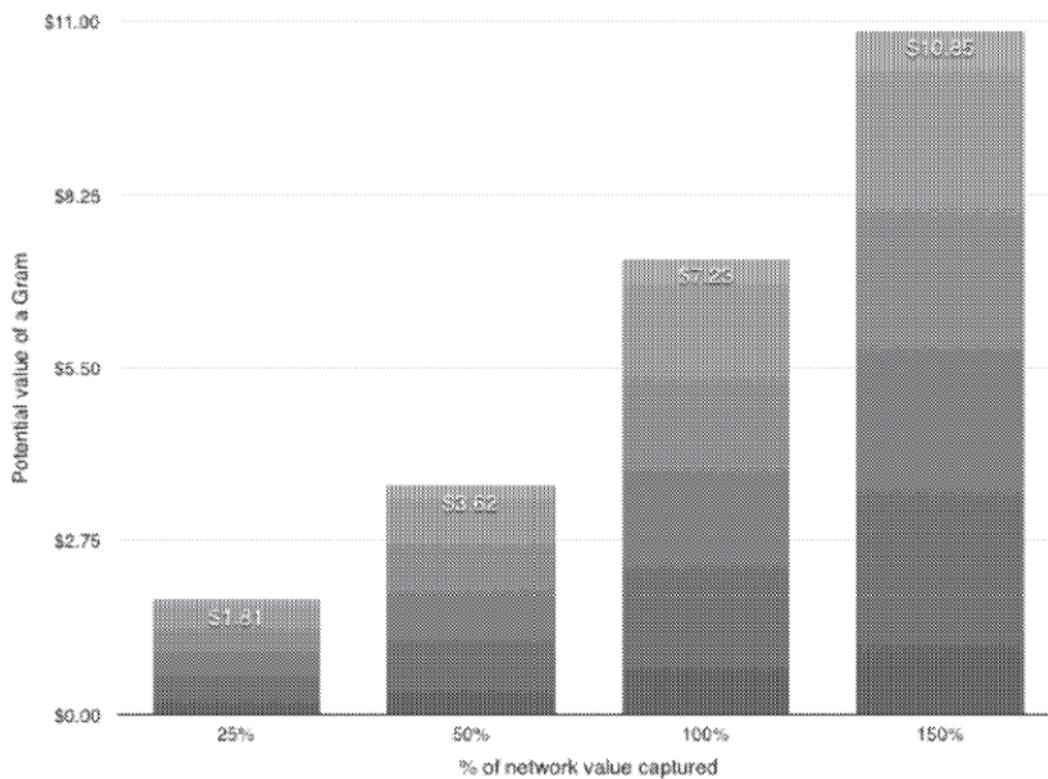
Messaging applications with hundreds of millions of users don't grow on trees, and as such, valuing them can be a fairly fickle activity. However, Facebook's acquisition of WhatsApp in 2014 might serve as a

²⁸ Source: Global Web Index: Telegram, BBM and WeChat users keenest on transferring money. Jason Mander, April 21, 2015. <https://blog.globalwebindex.net/chart-of-the-day/telegram-bbm-and-wechat-users-keenest-on-transferring-money/>

good measuring stick, Facebook paid roughly \$40 per user in the transaction. By this logic (and adjusting for inflation), we would estimate the market value of the Telegram Network in 2021 to be roughly \$30.7 billion.

Thus, we can see that with a circulating supply of 4.24 billion Grams (assuming the TON Reserve holds 20% of total supply) we can forecast a price of \$7.23 per Gram in 2021 if the TON blockchain is to capture 100% of the value of Telegram itself:

Figure 5: Hypothetical Value of a Gram based off Telegrams Network Value in 2021



For a token bought midway through the first stage of the crowd sale (for roughly USD \$0.33) this would represent a 181% annualized return over three years:

Table 1: Hypothetical Value of a Gram based off Telegrams Network Value in 2021

% of network value captured	Gram Price	Implied Mkt Cap (billions)	CAGR
25%	\$1.81	\$7.68	77%
50%	\$3.62	\$15.35	123%
100%	\$7.23	\$30.7	181%
150%	\$10.85	\$46.05	222%

Limitations:

Unproven Technical Claims

The TON team makes some bold technical claims in their White Paper, promising speed and scalability solutions that have been slowing Bitcoin and Ethereum's progress thus far. Charlie Noyes, from Pantera Capital, recently highlighted several valid concerns regarding the technological promises that the TON White Paper promises to deliver.²⁹ In addition to an unproven encryption protocol, TON plans on incorporating technical innovations that have been proposed and discarded before. For example, they propose hypercube routing as an integral and revolutionary part of their architecture yet contribute nothing novel to previous hypercube routing research, which was carried out and dismissed by the founder of Ethereum, Vitalik Buterin back in 2014.

Although Telegram boasts an extraordinarily competent team rooted in past success, they make bold assertions in a somewhat unexplored domain. It is hard to know whether they will deliver on their technological claims that promise to be radically better than current projects in the space, which have been dedicated to finding speed and scaling solutions for a significantly longer period of time.

Blurred Line between Telegram and TON blockchain

Investing in the TON blockchain could mean that you are funding Telegram itself without gaining equity in Telegram, and the rights that come with being an equity holder. A foreseeable risk could be that Telegram uses ICO funds to propel itself forward and leave TON blockchain by the wayside. Pavel Durov has been self-funding Telegram for the past few years out of his own back pocket (Telegram's budget in 2017 amounted to \$70m).³⁰ Through this ICO, this could be a way for him to continue to capitalize Telegram without any guarantees or liability for Gram token holders.

Lock-up Period for First Stage Investors

The 18-month lock-up period imposed upon first stage investors has two associated risks. Illiquidity is often a valid risk factor for any investor; 18-months is a relatively long period to endure in-the cryptoasset space without having the option to liquidate. Secondly, upon expiration of the lock up period, the release of all first stage subscribed tokens may dilute the circulating supply in the free market and could adversely affect the price of a Gram. However, this may be appropriately mitigated through the gradual token releases in four equal tranches until the full release after 18-months. Although the lock-up period can be a turn-off for many investors, we believe that it is implemented from a well-designed economic standpoint and has an overall net positive effect. It helps to stabilize the price of a Gram in its inception and ensures that a large core of the investor base is made up of genuine long-term investors, rather than short-term speculators.

²⁹ Source: Token Economy: \$600 million TONs of crap. Charlie Noyes, January 14, 2018. <https://tokeneconomy.co/a-ton-of-crap-b1e264c36802>

³⁰ Source: ICO Volting. <https://icovolting.com/project/telegram-ton/white-papers/2018-01-25/uses-of-ton-as-a-cryptocurrency-roadmap-token-distribution>

Conclusion:

In an incredibly exciting but currently oversaturated environment (where projects with no product or proven track record are raising funds well beyond their true value), it is refreshing to see an entity with a well-established user base and track record, propose, what we view as, an ambitious yet viable endeavor. Although there have been concerns raised about the relatively high valuation of the offering, we believe that the valuation can be justified considering it is the first institutionally aimed ICO and the team has delivered on product before. No other emerging blockchain project can boast a pre-existing active user base of more than 170 million people, which continues on its path of rapid user acquisition and organic growth.

In a few years, we foresee an environment where millions of people will use a messaging app to make instant cross-border payments to friends or within a digital marketplace. Taking a long-term outlook, we think that the TON blockchain, its accompanying various versatile components and its native token, Grams, has a real opportunity to be the primary platform that executes on this vision and is well-positioned to capture a significant share of the payments market. If the internet is the primary provider of the decentralized transfer of information (World Wide Web), then TON blockchain aims to be the primary provider of the decentralized transfer of value (The Open Network). Although TON blockchain is certainly an ambitious project, we believe that they have the skill-set to justify their \$1.2B raise. The team promises to move quickly with the TON blockchain and light wallet scheduled to be released by the end of this year.

While the opacity and unproven claims of the Technical White Paper are slight cause for concern, we think that exposure to this offering is advantageous as part of a diversified cryptoasset portfolio. There are countless cryptoasset offerings in the market today, however, none come close to offering the attributes of this opportunity. Quite frankly, we believe that no other project will offer the chance to invest in a team with such demonstrated capabilities and experience who are building a platform on top of a network that exhibits strong potential value. When allocating to the cryptoasset space, we would believe it short-sighted to not have exposure to a project with these unique attributes.